

**REMARKS:**

In this application claims 1-26 stand rejected. Claims 2-7 and 9-15 are previously presented, claims 17-22, 24 and 26 are original, claims 1, 8, 16, 23, and 25 are currently amended, and claims 27-29 are new. Thus, claims 1-29 are pending in this application. No new matter has been added. The Applicant respectfully traverses the rejections based on the above amendments and the arguments that follow. The remarks included in the response mailed November 3, 2006, in this application, are hereby incorporated herein by reference.

**Changes to the Specification:**

For the sake of convenience, the paragraph numbering as presented in the published version (U.S. Patent Application Publication 2005/0027711) of the current application is employed herein. The term “indexing instruction” is incorporated into paragraph [0023] to distinguish the instructions presented for navigating using the indexing technique presented in Figure 1 from the “routing instructions (records)” discussed in paragraph [0028], and elsewhere in the specification as filed. The changes to the specification are fully supported by the application as filed. No new matter has been entered.

**Changes to the Claims:**

Claims 1, 8, 16, 23, and 25 have been amended, and new claims 27-29 have been added to more clearly claim the bounds of the present invention. The changes to the claims are supported by the original application as filed. No new matter has been added.

**Objections to the Claims:**

Claims 4 and 14 are objected to for having had incorrect status indicators in the immediately preceding response. In this response, claims 4 and 14 are accurately indicated as “previously presented.” Accordingly, reconsideration is respectfully requested.

**Rejection under 35 U.S.C. § 112, Second Paragraph:**

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, for omitting essential elements. Claim 1 has been amended to suitably connect the various claim paragraphs included therein. Claims 8-9 and 23 are rejected for lacking antecedent basis for terms recited therein. Claims 8 and 23 have been amended to recite the term “digits” for which antecedent basis exists,

instead of the term “constituent elements”. In light of the above amendments, the claims are definite under 35 U.S.C. § 112, second paragraph. Accordingly, reconsideration is respectfully requested.

**Rejection under 35 U.S.C. 101:**

Claims 1-24 are rejected 35 U.S.C. § 101 for being directed to non-statutory subject matter. Applicants note that claims 16-24 no longer depend from claim 1 and the rejection may no longer apply to these claims. However, at the very least, the following remarks remain pertinent to claims 1-15 in their current form.

With regard to rejections under 35 U.S.C. § 101, the M.P.E.P. recites that “[t]he examiner bears the initial burden ... of presenting a prima facie case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If the record as a whole suggests that it is more likely than not that the claimed invention would be considered a practical application of an abstract idea, natural phenomenon, or law of nature, then USPTO personnel should not reject the claim. After USPTO personnel identify and explain in the record the reasons why a claim is for an abstract idea with no practical application, then the burden shifts to the applicant to either amend the claim or make a showing of why the claim is eligible for patent protection. See M.P.E.P. § 2106 (D) (emphasis added).

In this case, the Office Action merely states the conclusion needed to reject the claims under 35 U.S.C. § 101, namely that claims 1-24 are directed to an abstract idea. Applicants respectfully contend that such a conclusory statement is insufficient to reject claims 1-24 in light of the above rule. Accordingly, Applicants respectfully request that the Examiner identify and explain the reasons why claim 1 is alleged to be directed only to an abstract idea, consistent with the requirements of M.P.E.P. § 2106, so that Applicants may have a full and fair opportunity to reply.

**Useful, Tangible, and Concrete Result:**

Applicants respectfully contend that claim 1 and the claims dependent thereon produce a useful result. The method of claim 1 operates to index a plurality of keys to a plurality of respective records. This result is useful for a subsequent process for finding a record, such as a routing instruction, using a data string query, such as a telephone number.

Moreover, the result of the method of claim 1 is tangible in that it produces a practical result. Specifically, an index is created that enables a more efficient search for a record, such as a routing instruction, than would be possible by comparing an input data string query, such as a telephone number, to all of the keys in a database.

The M.P.E.P. recites that the opposite of “concrete” is unrepeatable or unpredictable. See M.P.E.P. § 2106. Applicants’ method is concrete under this standard. For a given set of keys and records, operation of the method of claim 1 would repeatably and predictably provide the same indexed relationship between the keys and the records. In view of the foregoing, Applicants respectfully contend that that claim 1 and the claims dependent therefrom are useful, tangible, and concrete and are therefore directed to patentable subject matter under 35 U.S.C. § 101. Reconsideration is respectfully requested.

**Rejection Under 35 U.S.C. § 102:**

Claims 1-26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Yau (U.S. Patent 6,741,688, hereafter Yau). Applicants respectfully contend that Yau does not describe all the limitations of claims 1-26 and therefore does not anticipate these claims.

Applicants first address any confusion arising from Yau’s use of the word “level” and the term as recited in Claim 1. Claim 1 refers to the database having “levels” that correspond to respective digits of each key. In contrast, Yau refers to a two-*level* logic device in which an incoming telephone number is first masked (first level) with an address mask to isolate sub-fields of interest within the telephone number and then compared (second level) to an address target to determine whether the selected sub-field of the telephone number matches the selected address target. See Yau, col. 4, lines 21-35.

Thus, Yau’s levels correspond to successive steps in the process of comparing a telephone number to keys, such as address targets, in the database, and not to organizational elements of database that correspond to respective digits of each key. Put another way, Yau does not contain plural levels, but simply compares a set of subfields identified in one step is compared to an address target. But the set of subfields is fixed, and always identified in one step, rather than the multi level approach of the present invention. Thus, the “levels” of Yau do not correspond to and do not anticipate the levels of Applicants’ claims.

Claim 1 is directed to a method for indexing a database and recites the limitations:

“obtaining an instruction at a first said level, wherein the instruction is associated with one or more records in the database” and

checking for another instruction at a second said level, and *if the another instruction does not specify a record, returning to the first level and indexing the data string in accordance with the one or more records associated with the instruction at the first level.* (emphasis added). In the above, it is noted that the various levels are levels of a database. Yau does not disclose these limitations. While Yau does not disclose indexing a database per se, in the following, Applicants compare Applicants’ recited limitations to the concepts in Yau most closely related to the recited limitations.

Yau discloses comparing telephone numbers to address targets. Upon locating a match between a telephone number and an address target, the call is screened or processed in accordance with the match. See Yau, col. 5, lines 1-4 and col. 9, lines 1-4. Applicants respectfully contend that the operation of Yau most closely associated with indexing a database is the association between a given address target, which may be analogized to a key, and a processing instruction linked to the given address target. However, Yau does not disclose dividing its database into levels corresponding to respective digit positions, obtaining a first instruction at one level of the database, checking a second level of the database, and returning to the first level if no record is specified at the second level, as claimed in claim 1. Instead, Yau processes all “levels” (or “digits” as the term is used in Applicants’ claim 1) of an address target at once and obtains one and only one record in response thereto. For example, the address target “1900” is associated with a single instruction, such as forwarding the call to a designated location. See Yau, col. 4, lines 36-49. Thus, if the pertinent field of an incoming telephone call matches the “1900” address target, the call is processed in accordance with the instruction linked to the “1900” address target. Yau, col. 4, lines 36-49. However, Yau does not obtain a first instruction for a first digit of the address target “1”, and then seek a second instruction for a second digit thereof “9”, and then return to the instruction for the first digit, if no record is specified in the instruction for the second digit.

Accordingly, Yau does not disclose the limitations of claim 1. Claims 2-15 depend from claim 1, inherit all the limitations thereof, and are therefore patentable over Yau for the same

reasons as claim 1. Instead, applicants contend that the above remarks clearly point to steps executed by the present method that are not executed by prior art methods. Thus, claims 1-15 are patentable over Yau under 35 U.S.C. § 102(e).

Claim 16 recites the language “each said level corresponding to a respective one of said digits”. Yau does not describe this limitation. As explained above, the multiple “levels” of Yau refer to the successive steps of masking and data target comparison, where both of these steps are applied to the same digits, which may include all the digits of the phone number or a subset thereof. Yau, col. 4, lines 21-35. Thus, the multiple “levels” of Yau do not correspond to the respective digits of the data string query, which, in Yau, is a telephone call. Yau’s levels therefore do not correspond to the “levels” of Applicants’ claims.

Claim 16 defines the limitations:

“checking for an indexing instruction for each said digit at a level corresponding to said digit and moving on to check a next level until an indexing instruction found at a last checked level does not include a sub-instruction to check a next level” and

“if said indexing instruction found at said last checked level specifies one or more records, returning said specified records to said data string query, otherwise backing up one level at a time until an indexing instruction specifying one or more records is found, and returning said specified one or more records to said data string query”. Claim 25 defines similar limitations. Yau does not define these limitations.

Yau discloses comparing the telephone number of a telephone call with one or more address targets and processing the call upon the occurrence of a match between any of the targets and the telephone number. Yau, col. 5, lines 1-4. Yau does not disclose checking for an indexing instruction for each digit of a data string query, until an instruction is encountered that does not direct the method to check any further levels of the database. Yau also does not disclose returning one or more records specified by the last found indexing instruction, if such records are present, or otherwise backing up through the levels until an indexing instruction

specifying one or more records is found. In Yau, a group of telephone number digits are compared to an address target all at once, not successively. An example of Yau's process of comparing one or more digits of a telephone number to an address target was discussed above in the remarks about claim 1. Consequently, that discussion is not repeated in this section. However, by way of summary, as with other exemplary address targets discussed in Yau, a set of digits of a telephone number are compared all at once to the "1900" address target, and if a match is detected, a call processing instruction associated with that address target is implemented. Clearly, Yau does not check for an indexing instruction for each digit of the "1900" address target until an indexing instruction is encountered that stops the method from checking any further digits or levels. Thus, Yau does not disclose the limitations of claims 16 and 25.

Thus, claims 16 and 25 define limitations not described in Yau and are therefore patentable over Yau under 35 U.S.C. § 102(e). Claims 17-24 depend from claim 16 and claim 26 depends from claim 25. The dependent claims inherit the limitations of their respective independent claims and are therefore patentable over the prior art for same reasons as the independent claims. Accordingly, claims 1-26 are patentable over Yau under 35 U.S.C. § 102(e).

**Response to the Intended Use Rejection:**

In the Office Action of January 22, 2007, the Examiner contended, in response to Applicants' arguments, that patentable weight would not be accorded to a recitation of the "intended use" of the invention. The Examiner recites the following language in its "intended use" rejection:

"a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim." See Office Action of 1/22/07, pages 10-11.

Applicants note that the language quoted above is drawn from an Examiner argument in *Ex Parte Hervy A. Morris*, 1998 WL 1736155 (Bd.Pat.App & Interf.). Significantly, in that case, the claim at issue was a device claim, and the limitation at issue was directed to an action that a portion

of the structure could perform. A case relied upon by the Examiner (in the cited case) in making the above argument, which also concerned a method limitation in a device claim, indicates that it is improper to rely on a method concept to distinguish a structural claim over the prior art. *In Re Otto*, 312 F.2d 937, 940; 136 USPQ 458, 459 (CCPA 1963) (emphasis added). Accordingly, it is clear that the quoted Office-Action language at issue, consistent with the legal authority on which it depends, pertains to *method limitations* in *apparatus claims*. Thus, Applicants respectfully contend that the stated restrictions on patentability are wholly inapplicable to the method claims presented in this application. Thus, based on the foregoing, claims 1-26 are allowable.

**The New Claims:**

New claims 27-29 have been entered in this amendment and are believed to be allowable over the prior art for many of the same reasons stated above in connection the previously entered claims.

**Conclusion:**

Based on the above amendments and remarks, the Applicant contends that all claims are allowable and respectfully request that the instant application be passed to issue. The Examiner is invited to call the below-listed attorney to resolve any outstanding matters. Payment for the attached RCE and for the additional claims presented herein. However, the Commissioner is hereby authorized to deduct any additional fees believed due from, or credit any overpayment to, our Deposit Account No. 11-0223.

Respectfully submitted,

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